## AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions of the claims in the Application. With reference to the listing it is noted that, herewith, claims 1 and 6 are canceled without prejudice or disclaimer, and claim 17 is added. No new matter has been added.

### Listing of Claims

Claim 1 (Canceled)

2. (Withdrawn) An AC adaptor separated from an electronic apparatus, and having a DC output unit which performs outputting under constant-voltage/constant-current control in order to charge a battery connected to said electronic apparatus, comprising:

a first constant-current control device which performs first constant-current control for charging said battery;

a second constant-current control device which performs second constant-current control for supplying an electric current necessary to drive said electronic apparatus;

a voltage detecting device which detects a voltage drop of the DC output; and

an internal temperature detecting device which detects an internal temperature,

wherein if the internal temperature becomes higher than a preset value, the DC output is shut down or the first constant-current control for charging said battery is performed.

3. (Withdrawn) An AC adaptor separated from an electronic apparatus, and having a DC output unit which performs outputting under constant-voltage/constant-current control in order to charge a battery connected to said electronic apparatus, comprising:

a first constant-current control device which performs first constant-current control for charging said battery;

a second constant-current control device which performs second constant-current control for supplying an electric current necessary to drive said electronic apparatus;

a voltage detecting device which detects a voltage drop of the DC output; and

a timer device which starts when detecting the electric current necessary to drive said electronic apparatus,

wherein if the constant-current control for supplying the electric current necessary to drive said electronic apparatus continues for not less than a preset time, the DC output is shut down or the first constant-current control for charging said battery is performed.

4. (Withdrawn) The AC adaptor according to claim 2, further comprising a display device, wherein said display device displays switching from the constant-current control for supplying the electric current necessary to drive said electronic apparatus to the shutting down the DC output, or the constant-current control for charging said battery is performed.

5. (Withdrawn) The AC adaptor according to claim 3, further comprising a display device, wherein said display device displays switching from the constant-current control for supplying the electric current necessary to drive said electronic apparatus to the state that the DC output is shut down or the constant-current control for charging said battery is performed.

Claim 6 (Canceled)

7. (Withdrawn) An electric current control method for an AC adaptor separated from an electronic apparatus, and having a DC output unit which performs outputting under constant-voltage/constant-current control in order to charge a battery connected to the electronic apparatus, comprising:

a first constant-current control step of performing first constant-current control for charging the battery;

a second constant-current control step of performing second constant-current control for supplying an electric current necessary to drive the electronic apparatus;

a voltage detection step of detecting a voltage drop of the DC output; and

an internal temperature detection step of detecting an internal temperature,

wherein if the internal temperature becomes higher than a preset value, a step of shutting down the DC output, or the step of first constant-current control for charging the battery is performed.

8. (Withdrawn) An electric current control method for an AC adaptor separated from an electronic apparatus, and having a DC output unit which performs outputting under constant-voltage/constant-current control in order to charge a battery connected to the electronic apparatus, comprising:

a first constant-current control step of performing first constant-current control for charging the battery;

a second constant-current control step of performing second constant-current control for supplying an electric current necessary to drive the electronic apparatus;

a voltage detection step of detecting a voltage drop of the DC output; and

a timer step which starts when detecting the electric current necessary to drive the electronic apparatus,

wherein if the constant-current control step of supplying the electric current necessary to drive the electronic apparatus continues for not less than a preset time, a step of shutting down the DC output, or the first constant-current control step of charging the battery is performed.

9. (Withdrawn) The method according to claim 7, further comprising a display step, wherein in the display step, switching from the constant-current control for supplying the electric current necessary to drive the electronic apparatus to the shutting down the DC output, or the constant-current control for charging said battery is displayed.

10. (Withdrawn) The method according to claim 8, further comprising a display step, wherein in the display step, switching from the constant-current control for supplying the electric current necessary to drive the electronic apparatus to the shutting down the DC output, or the constant-current control for charging said battery is displayed.

11. (Withdrawn) A computer program for allowing a computer to execute an electric current control method for an AC adaptor separated from an electronic apparatus, and having a DC output unit which performs outputting under constant-voltage/constant-current control in order to charge a battery connected to the electronic apparatus, comprising:

a first constant-current control step of performing first constant-current control for charging the battery;

a second constant-current control step of performing second constant-current control for

supplying an electric current necessary to drive the electronic apparatus; and

a voltage detection step of detecting a voltage drop of the DC output,

wherein if the output voltage becomes lower than a preset value, the second constant-current control step of supplying the electric current necessary to drive the electronic apparatus is performed.

12. (Withdrawn) A computer program for allowing a computer to execute an electric current control method for an AC adaptor separated from an electronic apparatus, and having a DC output unit which performs outputting under constant-voltage/constant-current control in order to charge a battery connected to the electronic apparatus, comprising:

a first constant-current control step of performing first constant-current control for charging the battery;

a second constant-current control step of performing second constant-current control for supplying an electric current necessary to drive the electronic apparatus;

a voltage detection step of detecting a voltage drop of the DC output; and

an internal temperature detection step of detecting an internal temperature,

wherein if the internal temperature becomes higher than a preset value, a step of shutting down the DC output, or the step of first constant-current control for charging the battery is performed.

13. (Withdrawn) A computer program for allowing a computer to execute an electric current control method for an AC adaptor separated from an electronic apparatus, and having a DC output unit which performs outputting under constant-voltage/constant-current control in order to

charge a battery connected to the electronic apparatus, comprising:

a first constant-current control step of performing first constant-current control for charging the battery;

a second constant-current control step of performing second constant-current control for supplying an electric current necessary to drive the electronic apparatus;

a voltage detection step of detecting a voltage drop of the DC output; and

a timer step which starts when detecting the electric current necessary to drive the electronic apparatus,

wherein if the constant-current control step of supplying the electric current necessary to drive the electronic apparatus continues for not less than a preset time, a step of shutting down the DC output, or the step of first constant-current control for charging the battery is performed.

14. (Withdrawn) A computer-readable recording medium characterized by recording computer programs cited in claim 11.

15. (Withdrawn) A computer-readable recording medium characterized by recording computer programs cited in claim 12.

16. (Withdrawn) A computer-readable recording medium characterized by recording computer programs cited in claim 13.

17. (New) A power supply device having a DC output unit which performs outputting under constant-voltage/constant-current control, comprising:

a constant-current control device which performs a first constant-current control operation for maintaining a first current value and a second constant-current control operation for maintaining a second current value which is larger than the first current value;

a voltage detecting device which detects a voltage drop of the DC output;

a temperature detecting device which detects a temperature of the power supply device; and

a switching device which switches a constant-current control operation from the first constant-current control operation to the second constant-current control operation when said voltage detecting device detects a voltage drop of the DC output while said constant-current control device performs the first constant-current control operation, and switches a constant-current control operation from the second constant-current control operation to the first constant-current control operation when said temperature detecting device detects that a temperature of the power supply device exceeds a predetermined temperature while said constant-current control device performs the second constant-current control operation.